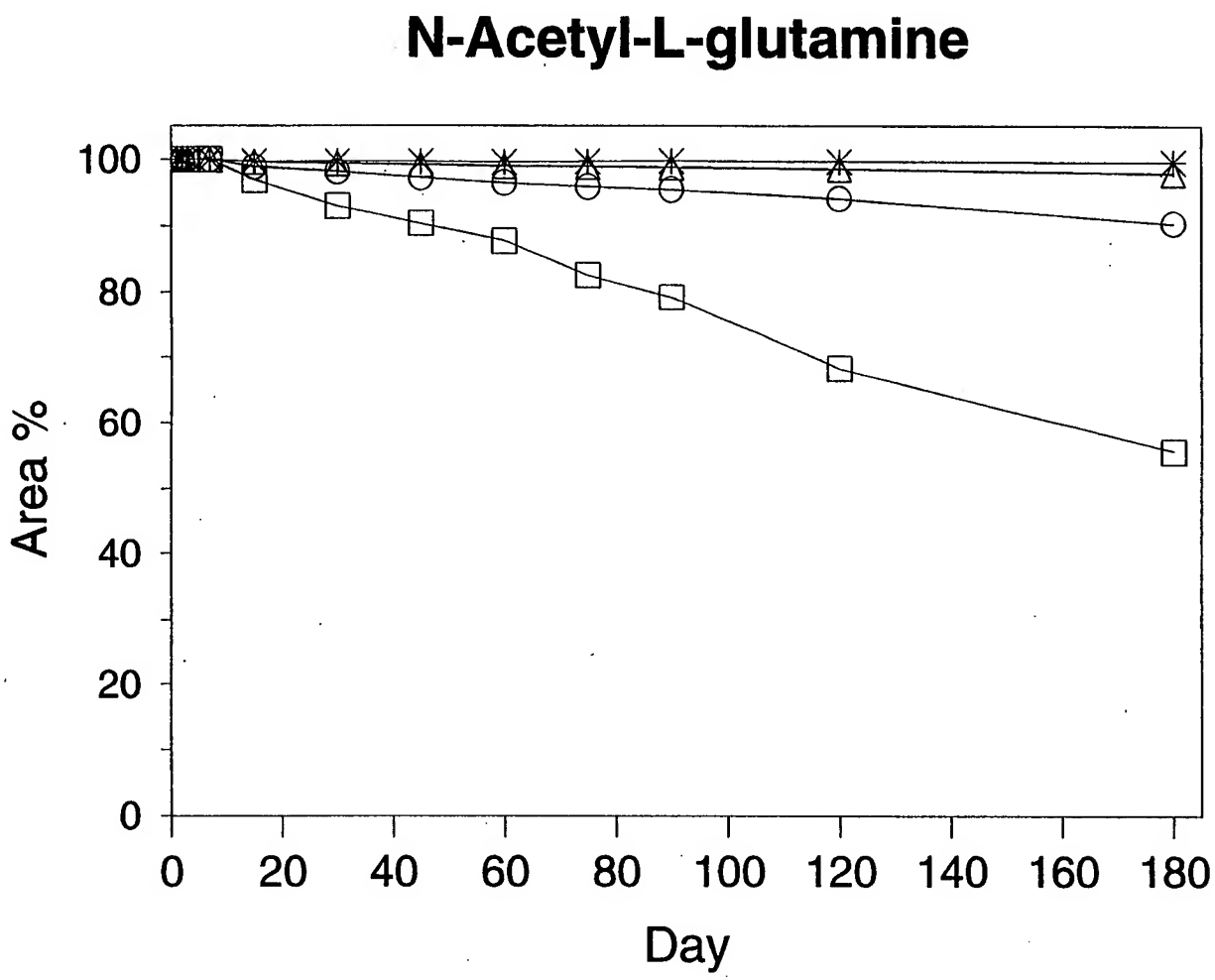


Figure 1: Aqueous stability of N-acetyl-L-glutamine at various pH (ambient temperature, in 1 pH unit increments from pH 2 to 8): (?) pH 2.0; (o) pH 3.0; (△) pH 4.0;? (✳) pH 5.0 to pH 8.0 (all values are the same for pH 5.0 to pH 8.0 samples).

Figure 1

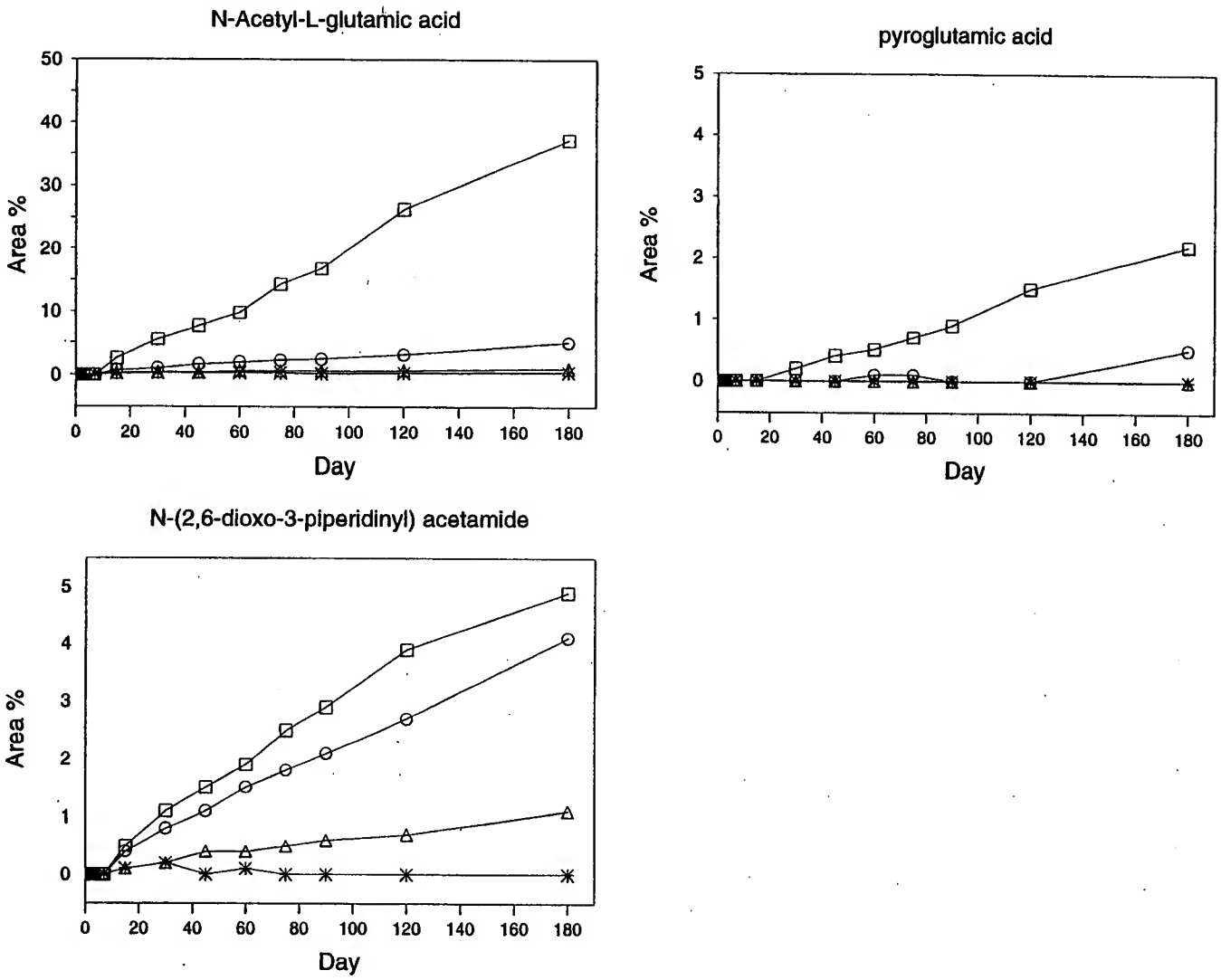
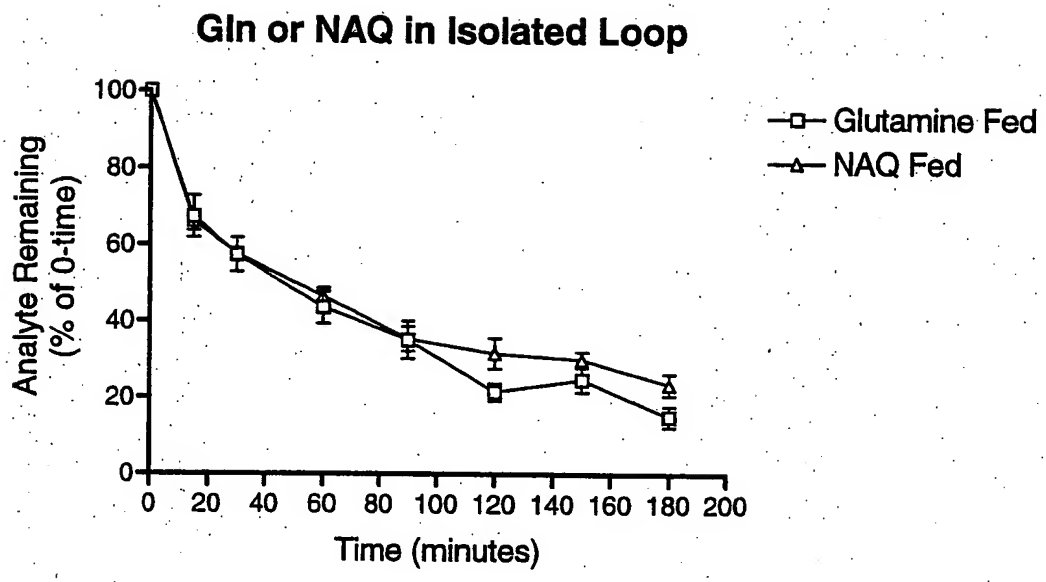


Figure 2: Degradation products of N-acetyl-L-glutamine in aqueous solution at various pH, (ambient temperature, in 1 pH unit increments from pH 2 to 8): (?) pH 2.0; (o) pH 3.0; (△) pH 4.0;? (✳) pH 5.0 to pH 8.0 (all values are the same for pH 5.0 to pH 8.0 samples).

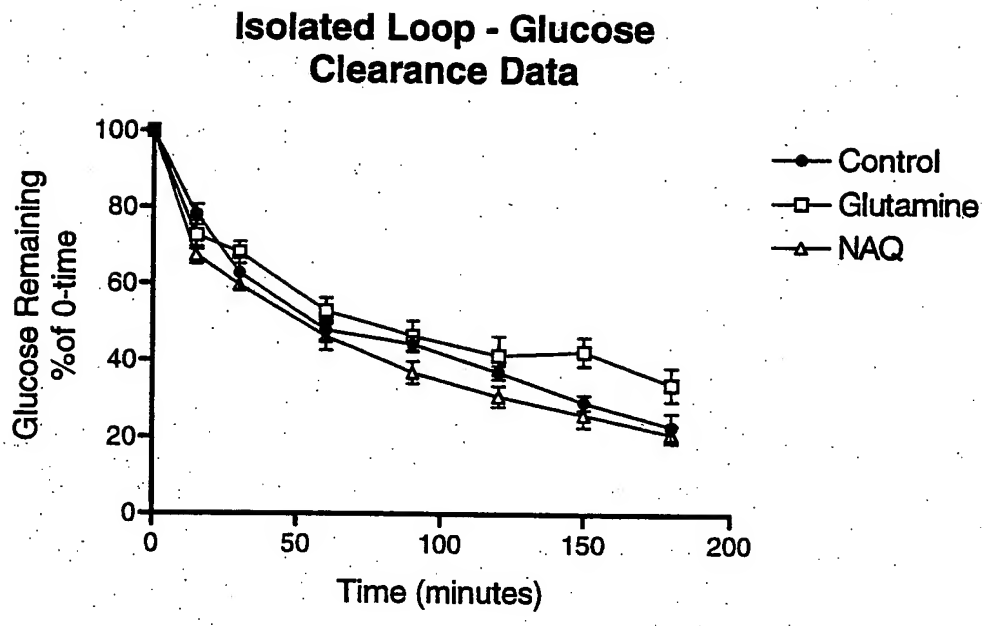
Figure 2

Figure 3



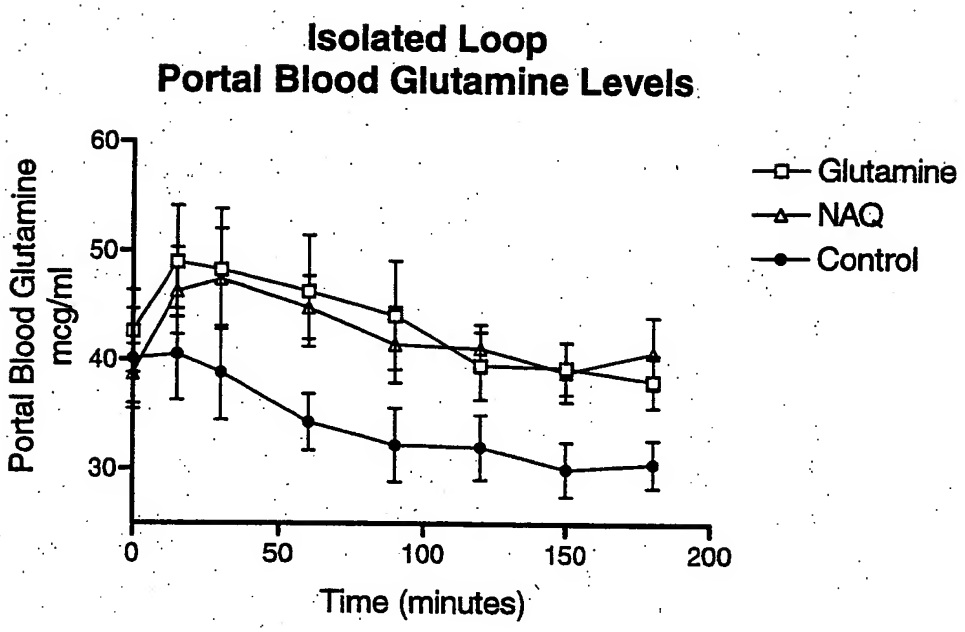
No significant difference between Gln or NAQ - t1/2 ~ 45 minutes.

Figure 4



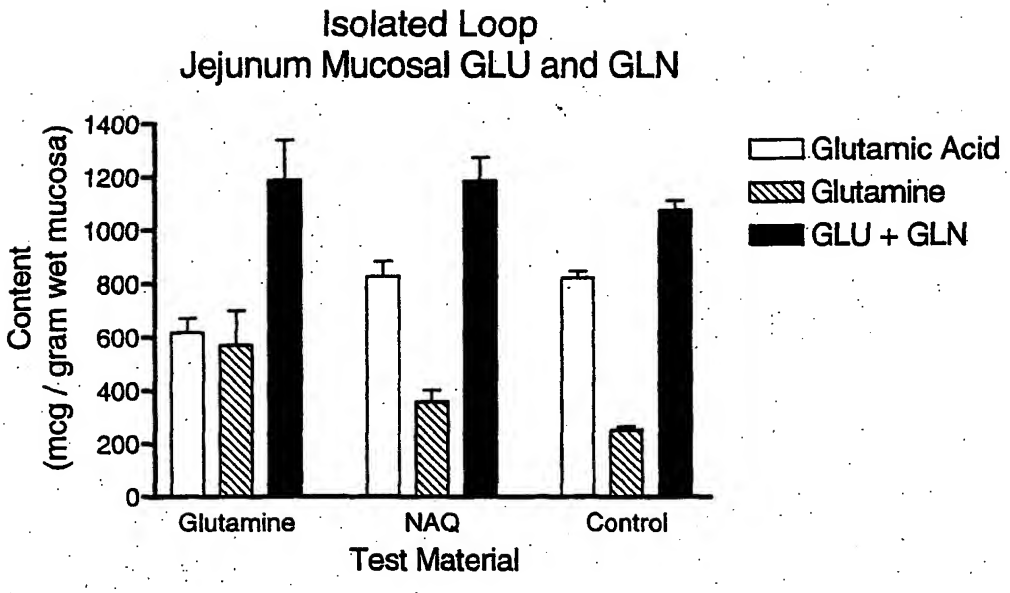
Glucose clearance from isolated intestinal loop. There was no significant difference between groups, and t1/2 is approximately 60 - 90 minutes.

Figure 5



Portal blood glutamine levels are not different whether glutamine or NAQ is placed in the isolated intestinal loop. Both are different from the control (no added glutamine source).

Figure 6



Isolated Loop - Total mucosal glutamine and glutamate analysis. Incubation with NAQ or Gln results in similar retention of GLN+GLU in the mucosa. NAQ does not produce as high a GLN content in the mucosa as GLN, but NAQ does prevent the loss of GLU content observed with GLN. Both GLN and NAQ are identical in supporting a slightly elevated mucosal content of GLN+GLU compared to control.

Electron transmission micrographs of enterocyte cytoplasm from healthy and malnourished pigs. Malnourished pigs received daily a supplement of caseinate, glutamine or NAQ.